

WHAT IS CLAIMED IS:

1 1. A distributed processing system having sensor based data collection
2 comprising:

3 a server system coupled to a network, wherein the network is configurable for
4 of coupling to distributed devices for processing workloads for the distributed
5 processing system;

6 one or more remote distributed devices (RDDs) selected from within the
7 distributed devices and accessible to the server system in response to an incentive
8 provided by the server system, each of the RDDs having an input/output (I/O) port for
9 coupling at least one environmental sensor (E-sensor) generating environmental data
10 (E-data) corresponding to the RDDs, wherein the E-data includes sensor
11 identification (ID) data identifying the E-sensor's corresponding type;

12 a software agent operating within each of the RDDs for sending location data
13 (L-data) corresponding to a location of the RDD, the E-data, and corresponding
14 sensor ID data to the server system in response to a received read sensor request;

15 a sensor database coupled to the server system for storing L-data, E-data and
16 corresponding sensor ID data; and

17 a software program executable by the server system for configuring one or
18 more sensor based data collection systems in response to user requests using the L-
19 data and corresponding sensor ID data in the sensor database.

1 2. The distributed processing system of claim 1, wherein L-data and E-data are
2 communicated to a customer system subscribing to a sensor based data service hosted
3 by the server system.

- 1 3. The distributed processing system of claim 1, wherein a time the read sensor
2 request is sent and a time corresponding E-data, L-data and sensor ID data are
3 received in the server system are stored by the server system.
- 1 4. The distributed processing system of claim 1, wherein selected ones of the
2 RDDs are wireless RDDs capable of mobile communication with the server system.
- 1 5. The distributed processing system of claim 4, wherein a wireless RDD
2 receives a request to move to a selected location to provide particular data collection
3 for the server system.
- 1 6. The distributed processing system of claim 5, wherein the request to move the
2 wireless RDD is in response to an emergency condition within or near the selected
3 location.
- 1 7. The distributed processing system of claim 1, wherein an E-sensor and a
2 location sensor (L-sensor) generating L data for an RDD are wireless sensors
3 physically coupled and mobile and having a wireless connection to the RDD.
- 1 8. The distributed processing system of claim 2, wherein the customer system
2 subscribing to the sensor based data service hosted by the server system may directly
3 request E-data from selected RDDs using L-data and corresponding sensor ID data in
4 the sensor database.
- 1 9. The distributed processing system of claim 1 further comprising a distributed
2 device performance capabilities database coupled to the server system, wherein L-
3 data and E-data of RDDs are stored with performance capabilities data for the RDDs.

- 1 10. The distributed processing system of claim 1, wherein the L-data is generated
2 by an L-sensor coupled to each of the RDDs.
- 1 11. The distributed processing system of claim 10, wherein the L-sensor is a
2 global positioning system (GPS) sensor.
- 1 12. The distributed processing system of claim 1, wherein L-data is determined
2 from a mailing address of a facility housing a corresponding RDD.
- 1 13. The distributed processing system of claim 1, wherein L-data is determined
2 from a network address of a corresponding RDD.
- 1 14. The distributed processing system of claim 1, wherein a first sensor based data
2 collection system within the one or more sensor based data collection systems is
3 dynamically reconfigured in response to a user analyzing previously received L-data
4 and E-data for the first sensor based data collection system.
- 1 15. The distributed processing system of claim 1, wherein a user sends a sensor
2 request to a particular RDD to add a first E-sensor in response to analyzing previously
3 received L-data and E-data for a first sensor based data collection system within the
4 one or more sensor based data collection systems.
- 1 16. The distributed processing system of claim 1, wherein the E-sensor is selected
2 from a class of sensors for quantifying any parameter that may be related to people,
3 property or physical conditions in an area in proximity to and including an RDD.

1 17. The distributed processing system of claim 1, wherein the E-sensor is selected
2 from a set of sensors consisting of biometrics detection sensors, early warning
3 network sensors, network intrusion sensors, radio frequency (RD) identification
4 transmitters and receivers, and system security sensors used to allow access to other
5 services supplied by the RDD or to monitor general activity at the RDD.

1 18. A method of forming a distributed processing system having sensor based
2 data collection comprising:

3 coupling a server system to a network connecting a plurality of remote
4 distributed devices (RDDs) capable of processing workloads for a distributed
5 processing system, wherein each of the RDDs has at least one input/output (I/O) port
6 for coupling a plurality of sensors;

7 providing an incentive for the RDDs to couple at least one environmental
8 sensor (E-sensor) generating E-data corresponding to the RDDs and to provide
9 location data (L-data) corresponding to an identifiable location of the RDD, wherein
10 the E-data includes sensor ID data identifying the type of the E-sensor;

11 executing a software agent in the RDDs, the software agent capable of
12 sending the L-data, E-data and corresponding sensor ID data to the server system in
13 response to a read sensor request;

14 receiving the L-data and sensor ID data from the RDDs and storing the L-data
15 and sensor ID data in a sensor database coupled to the server system; and

16 configuring the distributed processing system having sensor based data
17 collection by requesting and collecting E-data from selected RDDs, wherein the
18 RDDs are selected using the L-data and corresponding sensor ID data in the sensor
19 database.

1 19. The method of claim 18, wherein L-data and E-data are communicated to a
2 customer system subscribing to sensor based data service hosted by the server system.

1 20. The method of claim 18, wherein a time the read sensor request is sent and a
2 time corresponding E-data, L-data and sensor ID data are received in the server
3 system are stored by the server system.

1 21. The method of claim 18, wherein the L-data is generated by a L-sensor
2 coupled to each of the RDDs.

1 22. The method of claim 21, wherein the L-sensor is a global positioning system
2 (GPS) sensor.

1 23. The method of claim 18, wherein the L-data is determined from an address of
2 a facility housing a corresponding RDD.

1 24. The method of claim 18, wherein L-data is determined from a network
2 address of a corresponding RDD.

1 25. A server system coupled to a network, wherein the network is configurable for
2 of coupling to one or more remote distributed devices (RDDs), each of the RDDs
3 having at least one input/output (I/O) port for coupling a location sensor (L-sensor)
4 for generating location data (L-data) corresponding to a location of the RDD and at
5 least one environmental sensor (E-sensor) generating environmental data (E-data)
6 corresponding to the RDDs, wherein the E-data includes sensor ID data identifying
7 the E-sensor's corresponding type comprising:

8 a sensor database coupled to the server system for storing L-data, E-data and
9 corresponding sensor ID data; and

10 a software program executable by the server system for configuring one or
11 more sensor based data collection systems in response to user requests using the L-
12 data and corresponding sensor ID data in the sensor database.

1 26. A software agent executable within a remote distributed device (RDD)
2 coupled to a server system through a network comprising a program of instructions
3 for implementing the steps of:

4 receiving a read sensor command from the server system;

5 reading environmental data (E-data) from one or more environmental sensors
6 (E-sensors) coupled to the RDD in response to the read sensor command, wherein the
7 E-data includes sensor identification (ID) data identifying the E-sensor's
8 corresponding type comprising;

9 reading location data (L-data) corresponding to a location of the RDD in
10 response to the read sensor command; and

11 sending E-data, corresponding sensor ID data and L-data to the server system.

1 27. The software agent of claim 26 further comprising an instruction to receive an
2 incentive from the server system to couple one or more E-sensors to the RDD and to
3 provide the L-data.

1 28. A computer program executable within a server system coupled to a network,
2 wherein the network is configurable for coupling to a plurality of remote distributed
3 devices (RDD) for processing workloads for the distributed processing system
4 comprising a program of instructions for implementing the steps of:

5 providing an incentive for the RDDs to couple at least one environmental
6 sensor (E-sensor) generating E-data corresponding to the RDDs and to provide
7 location data (L-data) corresponding to an identifiable location of the RDD, wherein
8 the E-data includes sensor ID data identifying the type of the E-sensor;

9 sending a read sensor request to the selected ones of the RDDs, wherein the
10 selected ones of the RDDs send E-data, sensor ID data and L data in response to the
11 read command;

12 storing the E-data, sensor ID data, and L-data in a sensor database accessible
13 by the server system;

14 receiving a request from a client system to configure a remote sensor based
15 data collection system having a desired geographical area of coverage;

16 reading L-data and corresponding sensor ID data from the sensor database and
17 selecting one or more candidate RDDs having a desired type of E-sensor and
18 locations corresponding to the desired geographical area of coverage;

19 sending the read sensor request to each of the one or more candidate RDDs at
20 a sample time;

21 receiving E-data, corresponding sensor ID data, and L-Data from the one or
22 more candidate RDDs, wherein a receive data time is stored corresponding to when
23 the E-data, corresponding sensor ID data, and L-Data are received; and

24 sending the E-data, corresponding sensor ID data, L-Data, and the
25 corresponding sample time and receive data time to the client system sending the
26 request to configure the remote sensor based data collection system.